AC/DC Current Probe
Model MR461

CE

The AEMC® MR Series AC/DC Probes are professional AC/DC current probes designed to extend current measuring capabilities of DMMs, oscilloscopes and other instruments. They are built to the latest safety and performance standards, including the CE Mark and UL approval. Two different hook-shaped jaws are offered, both permitting the user to "pry" or "hook" onto cables (will accept 2 x 500MCM) or even onto small bus bars.

The MR Series probes use Hall effect technology and measure AC and DC current. The electronics and batteries are self-contained in the handles. The output of the AC/DC probes is 1mV/A and 10mV/A. The Model MR461 measures to 400AAC/600ADC . The Model MR461 has two ranges and an auto-zero push button (patent pending) for quick DC zeroing.

There is no output filtering — True RMS with DC component measurements are possible. Phase shift is excellent, making the MR Series of current probes well suited for power and power quality applications.

The Model MR461 is designed for oscilloscopes, waveform displaying instruments and other frequency sensitive displaying instruments with BNC inputs.

Features

- Measurement range of 400AAC/600ADC
- Measurement range of 1000AAC/1500ADC
- Distinct jaw shapes to be used for hooking or prying around the conductor
- Auto-zero push button
- Conforms to EN 61010, 600V, Cat. III safety standard
- Low phase shift for power measurements
- mV output signals
- Designed for DMMs, recorders, oscilloscopes, power and harmonic meters
- Double Insulation
- CE Mark

Applications

- DC motors
- Batteries
- Automobile engine testing
- Power measuring quality analysis
- Power load monitoring

BYRAM LABS
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Specifications

MODEL	MR461
ELECTRICAL	
Nominal Range	40AAC/60ADC & 400AAC/600ADC
Measurement Range	0.2 to 600A
Output Signal	40A: 10mV/A 400A: 1mV/A
Accuracy (60ADC Range) 0.5 to 40A	1.5% of Reading ± 0.5A
40 to 60ADC only	1.5% of Reading
Phase Shift (60A Range) 10 to 20A	≤3.5°
20 to 100A	≤3°
Accuracy (600ADC Range) 0.5 to 100A	1.5% of Reading ± 1A
100 to 400A	2% of Reading
400 to 600ADC only	2.5% of Reading
Phase Shift (600A Range) 10 to 100A	≤3.0°
100 to 400A	≤2.5°
Overload	1000AAC and 1500ADC continuous up to 1kHz
Frequency Range	DC to 10kHz @ -3dB
Load Impedance	>100kΩ/100pF max
Working/Common Mode Voltage	600Vrms
Battery	9V Alkaline (Approx. 50 hours life)
Output Termination	6 ft BNC
MECHANICAL	
Operating Temperature	14° to 131°F (-10° to 55°C)
Storage Temperature	-40° to 176°F (-40° to 70°C)
Operating Relative Humidity	10 to 35°C 90% ± 5% RH (without condensation), 40 to 55°C 70% ± 5% RH (without condensation)
Zero Adjustment	Auto-zero
Jaw Opening	1.2" (31mm)
Maximum Conductor Size	One 1.18" (30mm) or two 0.95" (24mm) or two bus bars 1.2 x 0.4" (31.5 x 10mm)
Dimensions	8.8 x 3.82 x 1.73" (224 x 97 x 44mm)
Weight	15 oz (440g)
Polycarbonate Material	Handles: Polycarbonate +ABS, Gray, UL94 V0. Jaws: Polycarbonate, Red, UL94 V0
SAFETY	
Electrical	EN 61010-2-32
Double Insulation ⧈	Yes
CE Mark	Yes

Note: Reference conditions: 18°C to 28°C, 20 to 75% RH, external magnetic field <40A/m, no DC component, no external current carrying conductor, test sample centered, 1MΩ ≤ 100pF load, zero adjustment (DC only) DC to 65Hz, battery voltage 9V ± 0.1V

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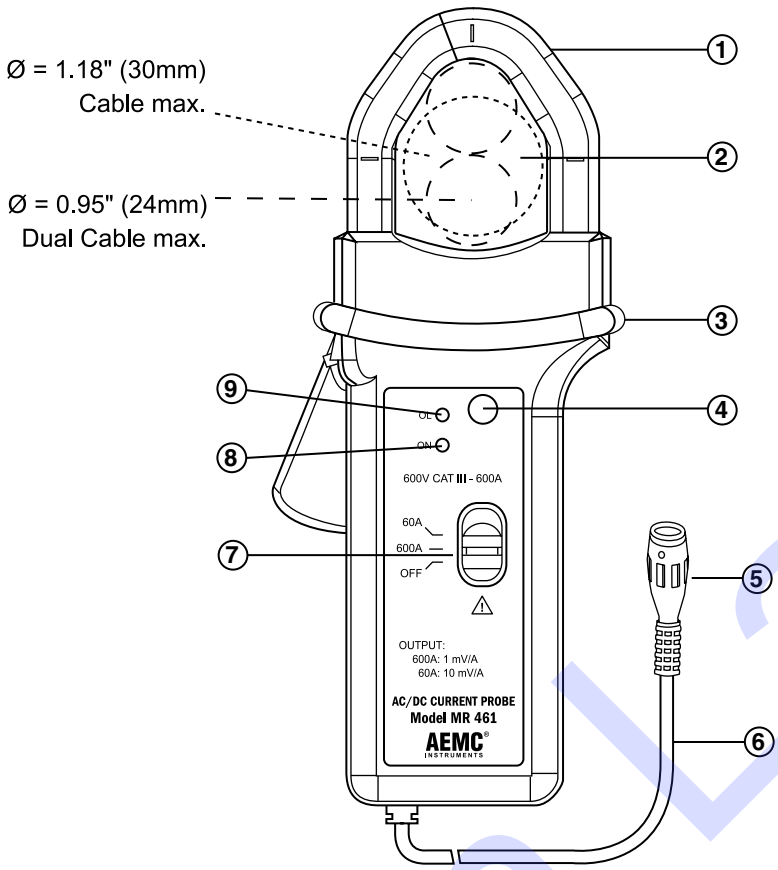

1. Jaws
2. Conductor
3. Protective non-slip guard
4. Automatic zero DC button
5. BNC connector
6. Lead, 5 ft (1.5m)
7. Range selection switch:
   - On/Off
   - 600A (1mV/A)
   - 60A (10mV/A)
8. Green light (on when battery voltage ≥6.5V)
9. Red light (overrange and incorrect zero adjustment)

Lead with BNC:
Insulated 6.5 ft (2m) coaxial cable with insulated BNC connector rated 600Vrms

ORDERING INFORMATION	CATALOG NO.
AC/DC Current Probe Model MR461 (BNC – 10mV/A – 60A max & 1mV/A – 600A max)	**Cat. #1200.72**
Includes a user manual	
Accessories (Optional)	
Banana/BNC connector XF-SS (4mm plug adaptor)	Cat. #2111.32

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